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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/309,844 05/11/99 PACK

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EXAMINER

SCHELL, J

ART UNIT

PAPER NUMBER

3619

DATE MAILED:

02/21/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/309,844	Applicant(s) PACK, WILLIAM	
	Examiner Joseph Schell	Art Unit 3619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on November 14, 2000.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- | | |
|---|--|
| 15) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 16) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 20) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 10, 11, 12, 14, 16, 17 and 18 rejected under 35 U.S.C. 102(b) as being anticipated by Wilson. Wilson discloses a work machine (10, see Figure 1, attached) comprising:

a main frame (16);

an engine enclosure (14) on the main frame; an engine assembly mounted (see column 2, line 25) on the main frame so that the engine assembly is located within the engine enclosure, and adjacent to a front portion of the main frame;

a radiator assembly (20) mounted on the main frame (16); and

a cab assembly (12) mounted on the main frame such that the cab assembly is interposed between the engine assembly and the radiator assembly (see Figure 2);

wherein the engine enclosure is devoid of a radiator assembly and the radiator assembly mounted on the main frame is located outside of the engine enclosure (see Figure 2);

a work implement (A, see Figure 2, attached) coupled to the main frame and

a ground engaging mechanism (B) mechanically coupled to the engine assembly;

the main frame (16) has a longitudinal axis, the radiator assembly (20) includes a cooling core (34) having an upper edge, and the cooling core is positioned relative to the longitudinal axis such that a linear extension of the upper edge defines a line L1, a line L2 is defined by a line which intersects the longitudinal axis so as to define a 90 degree angle alpha therebetween, an angle sigma is defined between the line L1 and the line L2, and

$40.0 \text{ degrees} \leq \sigma \leq 95.0 \text{ degrees}$ (see column 3, lines 51 through 67. Lines 63 and 64 disclose the cooling system could be mounted to one side of the cab, which would be perpendicular to the cab and sigma would be 90 degrees);

a work implement (A) coupled to the main frame (16), and the radiator assembly (20) is interposed between the work implement (A) and the cab assembly (12);

the radiator assembly (20) includes a radiator fan (30A) and a cooling core (34); and the cooling core is interposed between the radiator fan and the cab assembly (12);

a conduit having a first end attached to the engine assembly, a second end attached to the radiator assembly, and the engine assembly is in fluid communication with the radiator assembly; and a cooling fluid which is advanced from the radiator assembly to the engine assembly through the conduit (see column 3, lines 6 through 18);

a ground engaging mechanism (B) mechanically coupled to the engine assembly; wherein actuation of the ground engaging mechanism by the engine assembly causes the work machine to be advanced over a ground segment.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson, as applied to Claims 10 and 12 above, and further in view of Wagner. Wilson discloses all the limitations of claim 13 except: the work implement includes a truck bed.

Wagner teaches of the work implement (9, see Figure 1) which includes a truck bed (5) to provide a reliable coupling unit for releasable connection of a low truck bed.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the work machine of Wilson and incorporate a work implement which includes a truck bed, as taught by Wagner, to provide a reliable coupling unit for releasable connection of a low truck bed.

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson, as applied to Claims 10 and 14 above, and further in view of Masury. Wilson discloses all the limitations of claim 15 except:

an engine fan mounted on the main frame such that the engine assembly is interposed between the engine fan and the radiator fan.

Masury teaches of an engine fan (9, see Figure 3) mounted on the main frame such that the engine assembly (8, see page 2, lines 29 through 41) is interposed between the engine fan and the radiator fan (19) to provide adequate engine

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compartment cooling in an improved vehicle construction wherein the radiator has been mounted in a separate chamber.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the work machine of Wilson and incorporate an engine fan mounted on the main frame such that the engine assembly is interposed between the engine fan and the radiator fan, as taught by Masury, to provide adequate engine compartment cooling in an improved vehicle construction wherein the radiator has been mounted in a separate chamber.

6. Claims 1, 2, 3, 4, 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnston in view of Wilson. Johnston discloses a work machine (10, see Figure 1) comprising:

- a main frame (24);

- an engine enclosure (22) mounted on the main frame;

- an engine assembly (30) mounted on the main frame;

- a radiator assembly (38) mounted on the main frame; and

- a transmission assembly mechanically coupled to the engine assembly and mounted on the main frame (although not illustrated, it is well known the transmission is mechanically connected to the engine);

wherein the engine enclosure (22) is devoid of a radiator assembly, the engine assembly (30) is located within the engine enclosure, and adjacent to a front portion of the main frame, and the radiator assembly (38) mounted on the main frame is located outside of the engine enclosure.

Johnston does not disclose:

the transmission assembly is interposed between the engine assembly and the radiator assembly;

the main frame has a longitudinal axis, the radiator assembly includes a cooling core having an upper edge, and the cooling core is positioned relative to the longitudinal axis such that a linear extension of the upper edge defines a line L1, a line L2 is defined by a line which intersects the longitudinal axis so as to define a 90 degree angle α therebetween, an angle σ is defined between the line L1 and the line L2 and $40.0 \text{ degrees} \leq \sigma \leq 95.0 \text{ degrees}$;

a cab assembly mounted on the main frame, wherein: the cab assembly is interposed between the engine assembly and the radiator assembly;

a work implement coupled to the main frame, and the radiator assembly is interposed between the work implement and the engine assembly;

the radiator assembly includes a radiator fan and a cooling core; and the cooling core is interposed between the radiator fan and the cab assembly;

a conduit having a first end attached to the engine assembly, a second end attached to the radiator assembly, and the engine assembly is in fluid communication with the radiator assembly; and a cooling fluid which is advanced from the radiator assembly to the engine assembly through the conduit;

a ground engaging mechanism mechanically coupled to the engine assembly; wherein actuation of the ground engaging mechanism by the engine assembly causes the work machine to be advanced over a ground segment.

Wilson teaches of the following to provide a self-contained engine cooling system adaptable particularly for behind the cab mounting on trucks and similar vehicles (see Abstract) which is readily accessible for maintenance and service:

a radiator assembly (20) mounted on the main frame (16) and located outside of the engine enclosure (14);

the main frame (16) has a longitudinal axis, the radiator assembly (20) includes a cooling core (34) having an upper edge, and the cooling core is positioned relative to the longitudinal axis such that a linear extension of the upper edge defines a line L1, a line L2 is defined by a line which intersects the longitudinal axis so as to define a 90 degree angle alpha therebetween, an angle sigma is defined between the line L1 and the line L2 and $40.0 \text{ degrees} \leq \sigma \leq 95.0 \text{ degrees}$ (see column 3, lines 51 through 67. Lines 63 and 64 disclose the cooling system could be mounted to one side of the cab, which would be perpendicular to the cab and sigma would be 90 degrees);

a cab assembly (12) mounted on the main frame, wherein: the cab assembly is interposed between the engine assembly and the radiator assembly (20);

a work implement (A, see Figure 2, attached) coupled to the main frame, and the radiator assembly (20) is interposed between the work implement (A) and the engine assembly;

the radiator assembly (20) includes a radiator fan (30A) and a cooling core (34); and the cooling core is interposed between the radiator fan and the cab assembly (12);

a conduit having a first end attached to the engine assembly, a second end attached to the radiator assembly, and the engine assembly is in fluid communication

with the radiator assembly; and a cooling fluid which is advanced from the radiator assembly to the engine assembly through the conduit (see column 3, lines 6 through 18);

a ground engaging mechanism (B) mechanically coupled to the engine assembly; wherein actuation of the ground engaging mechanism by the engine assembly causes the work machine to be advanced over a ground segment.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the work machine of Johnston and incorporate the following, as taught by Wilson, to provide a self-contained engine cooling system adaptable particularly for behind the cab mounting on trucks and similar vehicles which is readily accessible for maintenance and service, wherein, the transmission assembly is interposed between the engine assembly and the radiator assembly:

a radiator assembly mounted on the main frame and located outside of the engine enclosure;

the main frame has a longitudinal axis, the radiator assembly includes a cooling core having an upper edge, and the cooling core is positioned relative to the longitudinal axis such that a linear extension of the upper edge defines a line L1, a line L2 is defined by a line which intersects the longitudinal axis so as to define a 90 degree angle α therebetween, an angle σ is defined between the line L1 and the line L2 and $40.0 \text{ degrees} \leq \sigma \leq 95 \text{ degrees}$;

a cab assembly mounted on the main frame, wherein: the cab assembly is interposed between the engine assembly and the radiator assembly;

a work implement coupled to the main frame, and the radiator assembly is interposed between the work implement and the engine assembly;

the radiator assembly includes a radiator fan and a cooling core; and the cooling core is interposed between the radiator fan and the cab assembly;

a conduit having a first end attached to the engine assembly, a second end attached to the radiator assembly, and the engine assembly is in fluid communication with the radiator assembly; and a cooling fluid which is advanced from the radiator assembly to the engine assembly through the conduit;

a ground engaging mechanism mechanically coupled to the engine assembly; wherein actuation of the ground engaging mechanism by the engine assembly causes the work machine to be advanced over a ground segment.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnston and Wilson, as applied to Claims 1 and 4 above, and further in view of Wagner. Johnston and Wilson discloses all the limitations of claim 5 except: the work implement includes a truck bed.

Wagner teaches of the work implement (9, see Figure 2) includes a truck bed (5) to provide a reliable coupling unit for releasable connection of a low truck bed.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the work machine of Johnston and Wilson and incorporate a work implement which includes a truck bed, as taught by Wagner, to provide a a reliable coupling unit for releasable connection of a low truck bed.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnston and Wilson, as applied to Claims 1 and 6 above, and further in view of Masury.

Johnston and Wilson discloses all the limitations of Claim 7 except:

an engine fan mounted on the main frame such that the engine assembly is interposed between the engine fan and the radiator fan.

Masury teaches of an engine fan (9, see Figure 3) mounted on the main frame such that the engine assembly (8, see page 2, lines 29 through 41) is interposed between the engine fan and the radiator fan (19) to provide adequate engine compartment cooling in an improved vehicle construction wherein the radiator has been mounted in a separate chamber.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the work machine of Johnston and Wilson and incorporate an engine fan mounted on the main frame such that the engine assembly is interposed between the engine fan and the radiator fan, as taught by Masury, to provide adequate engine compartment cooling in an improved vehicle construction wherein the radiator has been mounted in a separate chamber.

Response to Arguments

9. Applicant's arguments with respect to Claims 1 through 18 have been considered but are moot in view of the new grounds of rejection.

10. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208

USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Schell whose telephone number is (703) 306-4612. The examiner can normally be reached on M-F (6:30 - 3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on (703) 308-2486. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

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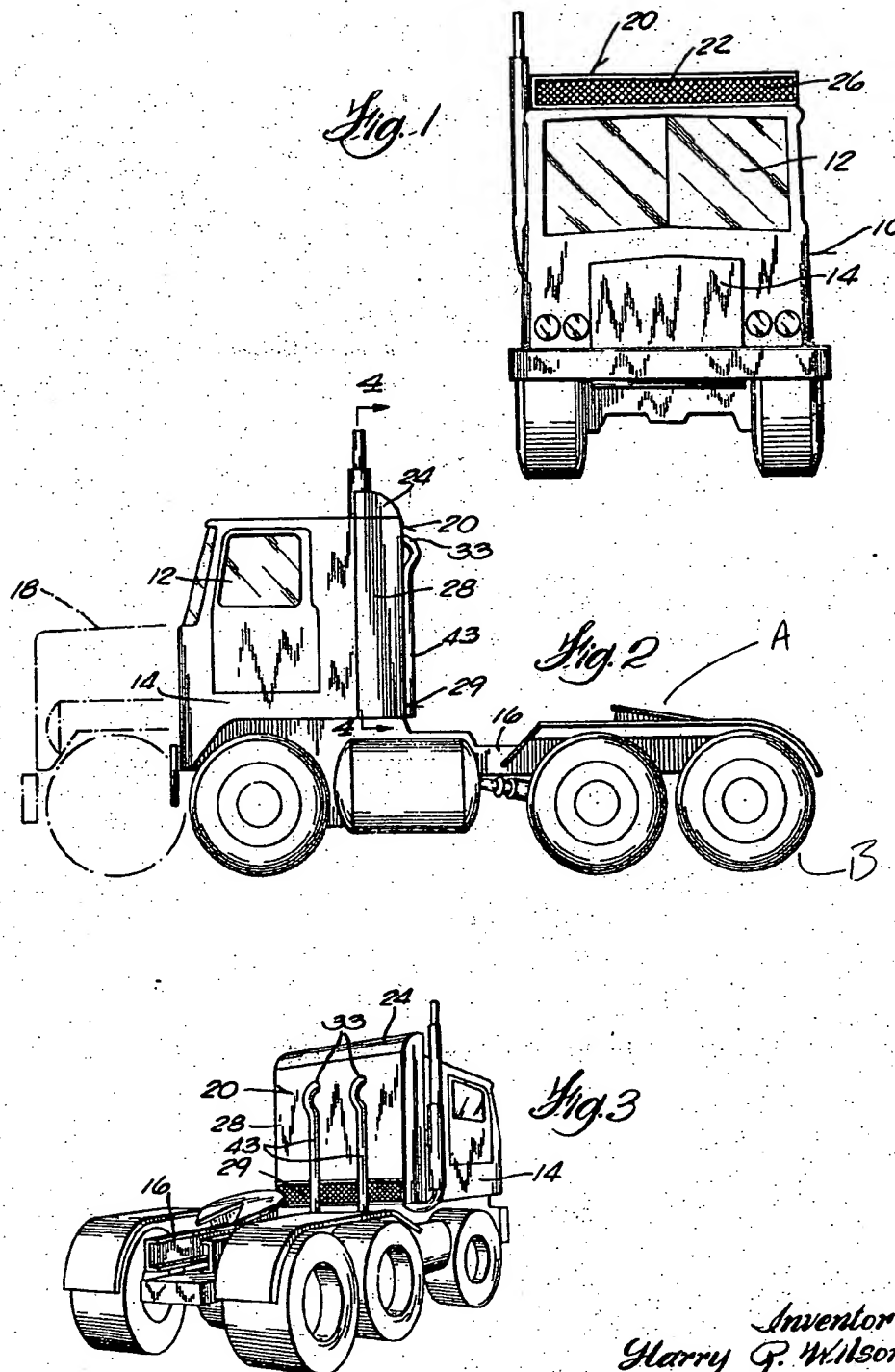
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

JAS

February 8, 2001

LANNA MAI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

Lanna Mai



Inventor
 Harry R. Wilson
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